

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	24715
<b>Description:</b> Lug Bracket	<b>Part Number:</b>	D3046-1
<b>Drawing:</b> D3046 Rev. A	<b>Qty:</b>	10

Step	Location	Procedure	By	Date	qty
1	EXPEDITING	Issue Work Order	u	05-10-27	10
2	PURCHASING	Issue P/O: 2008867 Laser cut per Dwg D3046 Material: ASTM A36 / A366 / A569 / A570 or AISI 1010 - 1025 Steel 0.100" thick Mechanical prop.: - UTS = Min.42ksi - YTS = Min.28ksi <b>Material release note required</b>	AL	05/10/27	10
3	RECEIVING	Receive and Inspect for transit damage <b>Ensure that material release note is attached</b>	u	05/11/22	12
4	QC	Inspect Level 6	J	05-12-13	12
5	METAL	Tumble & deburr	JAD	05/12/28	12
6	METAL	Bend as per dwg D3046	SB	06/01/03	12
7	QC	Inspect Level 5	J	06-01-03	12
8	STORES	Identify and Stock	J	06-01-05	12
9	EXPEDITING	Close W/O Cost / part	J	06/01/06	12

Rev	Date	Change	Revised By	Approved
A	01.08.27	New Issue	SM	E

**RELEASED**

01-08-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: PL Date: 06/01/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

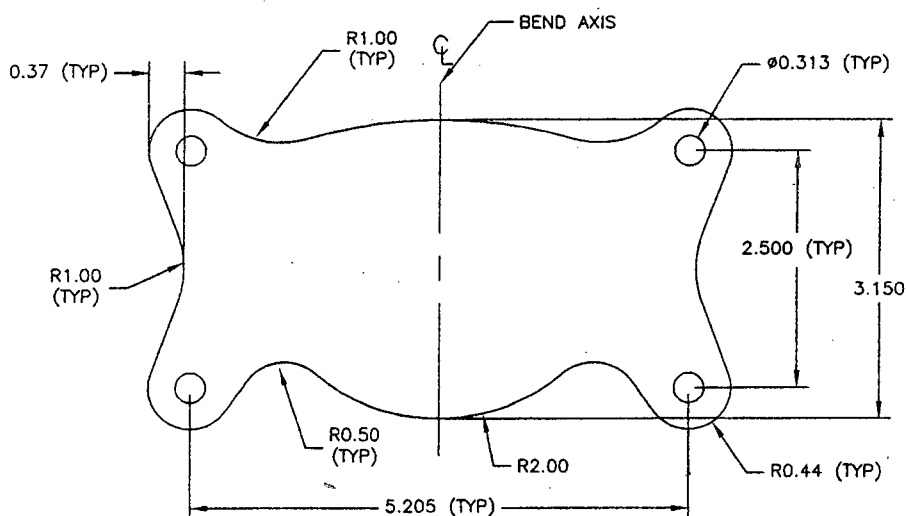
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

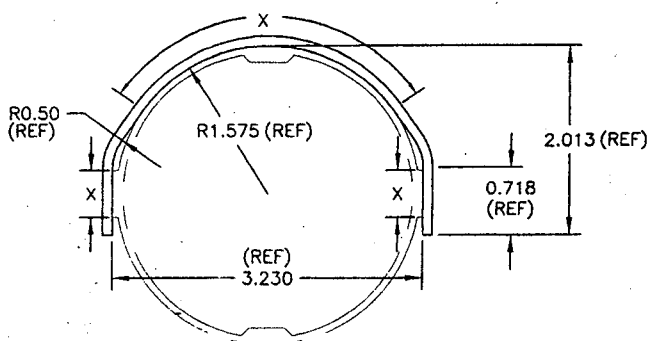


DESIGN #	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3046	REV. A SHEET 2 OF 2
DATE 01.08.23		TITLE LUG BRACKET	SCALE 1:2

**CONTROLLED COPY**



D3046-11 FLAT PATTERN  
SYMMETRICAL ABOUT CENTRE-LINES (C)



D3046-1  
(MAKE FROM D3046-11)

D3046-1 SHOULD BE BENT SO THAT IT IS WITHIN 0.010 OF THE OUTSIDE PROFILE OF THE D2600-1 EXTRUSION IN THE AREAS INDICATED 'X' ABOVE.

**GENERAL NOTES**

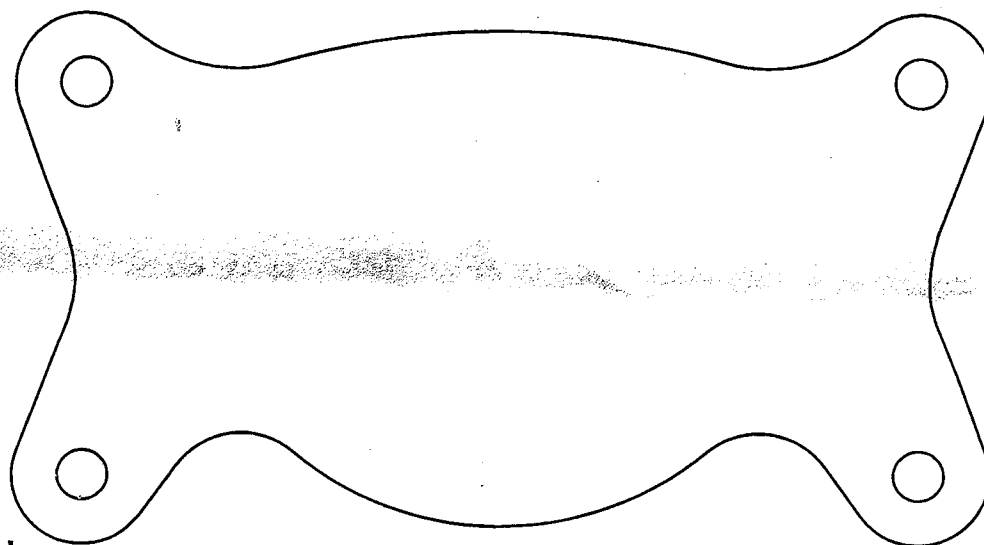
MATERIAL: ASTM A36/A366/A569/A570 OR AISI 1010-1025 STEEL 0.100 THICK (12 GAUGE)  
MIN. ULTIMATE TENSILE STRENGTH = 42 ksi  
MIN. YIELD TENSILE STRENGTH = 28 ksi

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
ALL DIMENSIONS ARE IN INCHES

**RELEASED**  
01.08.27

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D3046-1a  
12ga ms

10p45

# ALGOMA STEEL INC.

105 West St., Sault Ste. Marie, Ontario, Canada, P6A 7B4

CUSTOMER PURCHASE ORDER NUMBER P50210ME002	ENTRY DATE 2005/02/11	SHIP DATE 2005/03/17	TALLY NUMBER 963428	SHIPPER'S NUMBER 09-	CARRIER NOKL	MILL ORDER -381265	64103
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CHARGE TO CUSTOMER NAME & ADDRESS

WILKINSON A DIVISION OF PREMETALCO INC  
888 SOUTH EAST MARINE DRIVE  
VANCOUVER BRITISH COLUMBIA  
V5X 2V3

SHIP TO CUSTOMER NAME & ADDRESS

WILKINSON A DIVISION OF PREMETALCO INC  
STATION 9777, FRASER STREET  
VANCOUVER, BRITISH COLUMBIA

## MILL TEST REPORTS

ALGOMA STEEL INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN HEREIN AS CONTAINED IN THE COMPANY RECORDS AND WITHIN THE SCOPE OF ACCREDITATION OF ISO/IEC GUIDE 25-1990 AS CONTAINED IN THE COMPANY RECORDS.

B. Thomson  
MANAGING METALLURGIST

THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ALGOMA STEEL INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-2624 COLLECT FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT.

### CUSTOMER SPECIFICATION

HOT ROLLED STEEL SHEET - CARBON - ASTM A1011 TYPE B (03) - CS - MATTE - P & OIL (W/FINISH) - CUT EDGE ACCEPTABLE - SEMI-CRITICAL SURFACE - ( AIM FOR LIGHT SIDE OF GAUGE & NO COIL BREAKS ) - ( FLATNESS CRITICAL )

### SUPPLEMENTARY INSTRUCTIONS

FAX SM ATTN M ELIAS 604 301 3244

INSP T/R

CHEMICAL ANALYSIS REPORT REQUIRED

CLUST  
USE

ELECTRICAL PANELS

2005/03/17 18:07

MEETS EN 10204 3.1.B AND DIN 50049 3.1.B

\*\*\*\*\* PRODUCT SHIPPED \*\*\*\*\*

CUSTOMER ITEM 001 OUR ITEM 001 DIMENSIONS .104 X 48 X COIL

COIL NUMBER	HEAT	NO. PIECES	WEIGHT	COIL NUMBER	HEAT	NO. PIECES	WEIGHT
9591434	1257D-53	1	29840	9591435	1257D-03	1	29440
9591436	1257D-54	1	29800	9591437	1257D-04	1	29040
9591438	1257D-55	1	29830				

\*\*\*\*\* CHEMICAL PROPERTIES \*\*\*\*\*

HEAT	C	MN	P	S	SI	CR	NI	CU	MO	AL	CB	V	B
1257D	TI	SN	N	AS	ZR	PB	SB						CA
	.05	.36	.011	.007	.02	.02	.13	.04	.01	.027	.000	.001	
	.001		.0037										

P/O 2008067

### \*\*WARNING\*\*

THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATIONS) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

PAGE 3 OF 3

205.12.13

**Linda Lacelle**

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**From:** Jeff Mostat [jeff@industriallaser.com]  
**Sent:** Wednesday, January 04, 2006 2:06 PM  
**To:** Aileen Provencal  
**Cc:** Linda Lacelle  
**Subject:** Re: P.O.# 2008867

Hi Aileen (and Linda),

It turns out that any material under 3/16" thick will not come with a tensile strength test report. (This info from Wilkinson Steel). All that is available to us (and them) is the chemical analysis report.

The material is ASTM A1011 type B, so a check of those standards and specs should give you the general info.

Let me know if you'll require more info from us.

Jeff Mostat  
Production Mgr.

Industrial Laser Cutting

ph.(604) 946-4152 ext.224  
fax(604) 946-4153

----- Original Message -----

**From:** Aileen Provencal  
**To:** jeff@industriallaser.com  
**Sent:** Wednesday, January 04, 2006 6:35 AM  
**Subject:** FW: P.O.# 2008867

Good Morning Jeff

Any luck with this yet?

Thanks  
Aileen

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**From:** Aileen Provencal [mailto:aprovencal@dartaero.com]  
**Sent:** Tuesday, January 03, 2006 11:10 AM  
**To:** jeff@industriallaser.com  
**Subject:** P.O.# 2008867  
**Importance:** High

Good Morning Jeff

HAPPY NEW YEAR!

We received item number D3046-1, with the certs attached but the UTS or the YTS results are not indicated. Please forward this information to Linda or I ASAP, so we may do the receiving for this material.

1/4/2006

**Specific Mechanical Properties of Various ASTM A1011 SS Grades**  
**Tensile Strength, min.**  
**ksi (MPa)**

Grade Minimum Yield Strength ksi (MPa)	49 (340)	52 (360)	53 (365)	58 - 80 (400 - 500)	55 (380)	ASTM Designation
30 (205)						A1011 Grade 30 SS
33 (230)						A1011 Grade 33 SS
36 (250)						A1011 Grade 36 Type 1 SS
36(250)						A1011 Grade 36 Type 2 SS
40 (275)						A1011 Grade 40 SS